

WHAT IS CLAIMED IS:

1. A semiconductor light-emitting device formed on a same  
lead frame on which a plurality of semiconductor light-  
emitting devices are formed in a straight line at a uniform  
spacing, said each semiconductor light-emitting device  
comprising:  
a plurality of lead means placed in parallel;  
semiconductor light-emitting means mounted on the  
upper end of one of said leads;  
bonding wire means for electrically connecting the  
semiconductor light-emitting means and the upper end of  
another lead means with a long axis and a short axis; and  
envelope means formed from a light-transmitting resin  
for sealing said semiconductor light-emitting means, said  
bonding wire, and the upper end of said lead, provided with  
a non-circular lateral cross-sectional surface structure,  
wherein when observed along a direction in which the  
plurality of light-emitting devices are mounted on the lead  
frame, a curvature of the lateral direction of said  
envelope is smaller than a curvature of the vertical  
direction of said envelope.
2. A semiconductor light-emitting device as claimed in  
claim 1, wherein the lateral cross-section of said envelope  
is shaped by being cut one part of said envelop in a  
straight line along the direction in which the plurality of  
light-emitting devices are mounted on the same lead frame.
3. A semiconductor light-emitting device as claimed in  
claim 1, wherein the lateral cross-sectional shape of said  
envelop means is an ellipse shape.
4. A semiconductor light-emitting device as claimed in  
claim 1, wherein the number of said lead means is two, and  
the number of said semiconductor light-emitting means is

one.

5. A semiconductor light-emitting device as claimed in claim 1, wherein the number of said lead means is three, and  
5 the number of said semiconductor light-emitting means is two.

6. A manufacturing process for a plurality of semiconductor light-emitting devices on a plurality of lead  
10 frames, on each of the lead frames a plurality of semiconductor light-emitting devices are formed, comprising steps of:

a process for forming the lead frame with a plurality of groups of side-by-side leads positioned in a straight  
15 line at a uniform spacing;

a process for forming an envelope adjusting jig whereon cavities at a plurality of points are positioned on the non-circular lateral cross-sectional surface structure, with a long axis and a short axis, so that when  
20 observed along a direction in which the plurality of light-emitting devices are formed on the same lead frame, a curvature of the lateral direction of said each envelope in the same lead frame is smaller than a curvature of the vertical direction of said each envelope, and the short  
25 axis is positioned on a straight line at a spacing which is the same spacing as the group of leads;

a process for mounting the semiconductor light-emitting element on the upper end of one lead of the group of leads and for connecting the semiconductor  
30 light-emitting element and the upper ends of the other leads of the group of leads with bonding wires;

a process for filling the light-transmitting resin into the cavities of the envelope adjusting jig;

a process for immersing the semiconductor  
35 light-emitting element, the bonding wire, and the upper end of the leads in the light-transmitting resin in the

cavities and sealing this part with the light-transmitting resin; and

5 a process for removing the lead frame from the envelope adjusting jig and separating each group of leads from the lead frame.

7. A manufacturing process for a semiconductor light-emitting device as claimed in claim 6, further comprising a process for offsetting the lead frames  
10 alternately at a suitable length only, so that the lead frames are respectively parallel.